AES

Adagio® Entertainment System

The Adagio Entertainment System (AES) delivers a complete, cost-effective solution for high-performance multi-room audio distribution. Right out of the box, the AES provides sophisticated audio signal routing, processing, and amplification for up to 6 rooms, with extensive control from an enhanced LCD-driven front panel and a choice of room controllers.

Multi-Room Audio
The AES supports up to 6 sets of stereo room speakers, allowing listeners in each room to listen selectively to any of 10 different stereo sources. Its integrated multi-channel power amplifier delivers a robust 45 watts per channel to all rooms. Without requiring any programming, the AES can easily be expanded to support a total of 12 rooms by adding an **AAE Audio Expander**. Or, as many as 24 rooms can be handled using 3 AAE's with simple setup provided by Crestron Adagio Composer software.

High-End Performance
An advanced Class G amplifier topology produces the great sound of a classic Class AB design with near-digital efficiency. A massive MOH-core toroidal power transformer directs pure, continuous power to each channel, achieving exceptional dynamic range and low distortion sound quality in every room. Gentle power-up is achieved through a "soft-start" inrush current limiting circuit, and quick-response output protection on each channel prevents failure caused by speaker line faults and overheating.

Enhanced Front Panel Control
With its large backlit LCD display, Room and Group select buttons, 4 softkeys and dual rotary encoders, the AES front panel provides a very powerful, yet friendly user interface for controlling audio to a houseful of speakers. Custom naming of rooms, groups, and sources is facilitated on the LCD display, and also on the custom backlit label strip using Crestron Engraver software.

Preset Groups
The "Group" feature makes it simple to combine speakers in adjacent rooms, or switch into whole-house party mode, by letting the user link any number of rooms to function as one. Grouping lets you easily route one source to multiple rooms at once without the sync problems common to streaming-based systems. Up to 6 groups can be defined using the front panel Preset Group buttons.

Versatile Room Controls
A choice of basic 12-button keypads or the advanced **APAD Wall Mount** LCD Controller enables versatile control of the AES in every room. A keypad provides the essential controls for adjusting volume, selecting sources, and toggling up and down through tracks and radio channels. For more elegant control, the APAD actually extends the many functions of the AES front panel to each room, providing true feedback for display of audio sources, radio stations, CD titles, artists, and tracks by name, plus audio settings and many other parameters.

Satellite Radio and Audio Servers
Up to 3 dual radio tuner cards can be installed in the AES to enable combinations of up to 6 AM/FM, XM and SIRIUS Satellite Radio tuners, letting listeners in different rooms each enjoy their own choice of music, news, sports and talk. With satellite's digital signal, plus RDS/RBDS data on the FM signal, the AES enables the display of the

full radio station name and other detailed information about the song or program that you're listening to. The AES comes with one tuner card included.

In addition to radio, ten line-level inputs are provided (Inputs 1-6 are shared with the tuner card slots) to accommodate external audio sources including Crestron's **AAS Audio Server** and **CEN-IDOC** Interface for Apple iPod® . Plug-and-play compatibility with the AAS* and CEN-IDOC* delivers instant access to an entire collection of music from any room in the house with fully-bidirectional communications for browsing by album, artist, and song title.

2-Series Ethernet Control System
Adagio brings Crestron's industry-leading Total Home Technology to homes of any size and budget. At the heart of the AES is the powerful 2-Series control engine. With both Cresnet and Ethernet connectivity, plus custom programmability using Crestron **SystemBuilder™** software, the AES allows expansion and customization using Crestron's line of touchpanels, wireless remotes, and hundreds of other devices. The built-in Web server with native **e-Control®2 XPanel** support enables full remote control over IP from computers and PDA devices, as well as remote diagnostics and updates. Built-in IR, RS-232, relay and digital input ports are included to interface the AES with non-Crestron devices ranging from CD changers to security systems.

Home Automation and Integration
More than just an audio distribution system, the AES can actually grow as part of a complete home automation solution supporting all of Crestron's Cresnet® and infiNET™ controllable dimmers, shade controllers, thermostats, and so much more.

> *Out-of-the-box audio distribution for 6 rooms, expandable up to 24*

> *Enhanced front panel setup and control*

> *Choice of 12-button room keypads or APAD LCD controllers*

> *Accepts up to 3 dual radio tuner cards for XM and SIRIUS Satellite Radio, and AM/FM radio with RDS/RBDS (1 tuner card included)*

CRESTRON

> *Plug-and-play support for Adagio Audio Server and iPod interface**

> *2-Series Ethernet control system — programmable to support Crestron touchpanels, wireless remotes, lighting dimmers, thermostats, and much more!*

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

Flash: 8 MB
SDRAM: 32 MB
NVRAM: 256 KB

Operating System

Real-time, preemptive, multitasking kernel, multi-threaded, FAT32 file system with long names; supports **SIMPL™ Windows®** and **SIMPL+®**

Ethernet

10/100BaseT, static IP or DHCP/DNS, SSL, autonegotiating, full duplex TCP/IP, UDP/IP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron **e-Control 2 XPanel** and **RoomView** applications

Audio

Typical of 6 Room Outputs:
Controls: Volume, Balance, Bass, Treble, Loudness, Mute, Mono, Input Compensation
Volume Gain Range: -80dB to +20dB, 1 dB steps
Mute: -100dB (electronic), -120dB (relay)
Input Compensation: ±10dB
Bass Gain Range: ±12dB @ 100Hz, 2 dB steps
Treble Gain Range: ±12dB @ 10kHz, 2 dB steps
Frequency Response: 20Hz to 20kHz ±0.2dB (preamp), 20Hz to 20kHz ±0.75dB (power amp)
S/N Ratio: >100dB (preamp), 100dB (power amp) 20Hz to 20kHz A-weighted
THD+N: <0.05% (preamp), 0.05% (power amp) 20Hz to 20kHz
Stereo Separation: >80dB (preamp), >75dB (power amp)

Connectors

NET 1 - 6: (6) 4-pin 3.5mm detachable terminal blocks;
Cresnet Master ports, provide data and power for keypads and other Cresnet devices
IR OUT 1 - 8: (8) 3.5mm TRS mini-phone jacks, IR/Serial ports;
IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0-5V) up to 9600 baud
IR IN: (1) 3.5 mm TRS mini-phone jack;
For connection of the **CNXRMIRD** IR receiver (sold separately);
Allows IR wireless control from Crestron and third-party remotes using RC-5 IR commands
INPUT 1 - 4: (1) 5-pin 3.5mm detachable terminal block;
Comprises (4) digital inputs;
Rated for 0-24 Volts DC, referenced to GND;
Input Impedance: 2.2k ohms pulled up to 5 Volts DC;
Logic Threshold: 2.5 Volts DC nominal
RELAY OUTPUT 1 - 4: (1) 8-pin 3.5mm detachable terminal block;
Comprises (4) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC;
MOV arc suppression across contacts
COM A - B: (2) DB9 male, bidirectional RS-232 ports;
Up to 115.2k baud, hardware and software handshaking support
COMPUTER: (1) 6-pin RJ11 female, bidirectional RS-232 computer console port
LAN: (1) 8-wire RJ45 with 2 LED indicators, 10/100BaseT Ethernet port;

Green LED indicates link status, Yellow LED indicates Ethernet activity
NET: (2) 4-pin 3.5mm detachable terminal blocks;
Cresnet Master ports, paralleled with NET ports 1 through 6;
Normally connect to **AAE**(s)
SLOT 1 - 3: (3) Adagio tuner card slots; accept choice of dual tuner cards;
Outputs from the tuner cards parallel to input and loop-thru jacks for SOURCES 1 - 6
SOURCES 1 - 10: (40) RCA female providing (10) unbalanced stereo line-level audio inputs with parallel loop-thrus; connect to outputs of sources, with loop-thru to **AAE**; Inputs 1 through 6 parallel with outputs from tuner card slots;
Maximum Input: 3.2 Vrms (flat);
Input Impedance: 47k ohms
PRE-AMP OUT 1 - 6: (12) RCA female providing (6) unbalanced line-level audio outputs; selectable for variable or fixed volume, bass, treble, balance, and loudness;
Maximum Output: 2.5 Vrms;
Output Impedance: 100 ohms
ROOMS 1 - 6: (12) 2-pin 7.62mm detachable terminal blocks, power amplifier outputs;
Wire Size: 12 AWG maximum;
Output Power (per Channel): 45 Watts at 8 ohms, 60 Watts at 4 ohms
FUSE: Main fuse, T8AH;
(1/4" x 1-1/4", 250V, 8A, time-lag, high-rupture rated)
120V~50-60Hz: (1) IEC Male; mates with removable power cord (included)
G: 6-32 screw, chassis ground lug
USB (front): (1) USB Type B female (behind label strip);
USB 1.1 computer console port (cable included)

LCD Display

Green LCD dot matrix, 128 x 64 resolution, adjustable LED backlight

Controls and LED Indicators

STANDBY: Pushbutton with green LED, places audio in standby
MUTE: Pushbutton with red LED, mutes audio in selected room or group
MODE/MENU: (8) Pushbuttons, select mode or menu item for adjustment: SOURCE, ROOM, HOUSE, MENU, BKLT, SCHED, DISPLAY, MORE (refer to manual)
SOFTKEYS: (4) LCD display-driven pushbuttons, select/activate various functions
ROOM: (6) Pushbuttons with green LEDs and backlit labeling strip, select room(s) to adjust
PRESET GROUP: (6) Pushbuttons with green LEDs and backlit labeling strip, select group(s) to adjust
SELECT: Continuous turn rotary encoder with adjoining "ENTER" pushbutton with green LED, for selecting rooms, sources, and radio stations
VOLUME: Continuous turn rotary encoder, adjusts volume of selected room or group
H: Hardware reset button, recessed, reboots the control system
S: Software reset button, recessed, restarts the SIMPL program

Power Requirements

Main Power Consumption : 7 Amps @ 120 Volts AC, 50-60Hz
Available Cresnet Power: 20 Watts (0.83 Amps @ 24 Volts DC)

Environmental

Temperature: 41° to 104°F (5° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 650 BTU/hr @ 8 ohms, 750 BTU/hr @ 4 ohms; all channels loaded to 1/8 full power

Enclosure

Black metal with molded ABS/PC front panel;
Freestanding, side ventilation should not be restricted

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CRESTRON®

Dimensions

Height: 7.39 in (18.78 cm)
Width: 17.16 in (43.59 cm)
Depth: 18.60 in (47.24 cm)

Weight

43.0 lbs (19.5 kg)

AVAILABLE MODELS

AES: Adagio Entertainment System (Includes [1] ATC-AMFM2 Dual AM/FM Tuner Card)
AES-SR: Adagio Entertainment System (Includes [1] ATC-AMFMSR AM/FM and Sirius Satellite Radio Tuner Card)
AES-XM: Adagio Entertainment System (Includes [1] ATC-AMFMXM AM/FM and XM Satellite Radio Tuner Card)

INTERNATIONAL VERSION (230 VAC)

AESI
All the features and specifications of the AES except:

Connectors (partial)

FUSE: Main fuse, T4AH;
(5mm x 20mm, 250V, 4A, time-lag, high-rupture rated)
230V~50-60Hz: (1) IEC Male; mates with removable power cord (included)

Power Requirements

Main Power Consumption : 3.5 Amps @ 230 Volts AC, 50-60Hz
Available Cresnet Power: 20 Watts (0.83 Amps @ 24 Volts DC)

AVAILABLE ACCESSORIES

APAD: Wall Mount LCD Controller
ATC-AMFM2: Adagio Dual AM/FM Tuner Card
ATC-AMFMXM: Adagio AM/FM and XM Satellite Radio Tuner Card
ATC-AMFMSR: Adagio AM/FM and SIRIUS® Satellite Radio Tuner Card
AAE: Adagio Audio Expander
AAS: Adagio Audio Server
CEN-IDOC: Interface for Apple iPod®
C2N-DBF12: 12-Button Decorator Function Keypad
CNXRMIRD: IR Receiver
STIRP: IR Probe
CNSP-XX: Custom Serial Interface Cable
C2N-TXM-C50: XM Antenna Extension Cable
AES/AMS FRONT LABEL: Backlit Engravable Label Strip